

REMARKS

Applicants appreciate the Office's review of the present application. In response to the Office Action, the cited references have been reviewed, and the rejections and objections made to the claims by the Examiner have been considered.

In order to place the application in condition for allowance, or alternately in better condition for appeal, claims 15-20 have been cancelled without prejudice. Applicants believe that the amendment to the abovementioned claims does not require a further substantive examination and does not present new matter, and therefore request entry of this amendment. Reconsideration of the application in light of the above amendments and the following remarks is respectfully requested.

Rejections

Rejection Under 35USC §102

Claims 29-32 and 34-37 have been rejected under 35 USC §102(e), as being anticipated by U.S. patent 6,266,493 to Farrell et al. ("Farrell '493"). Applicants respectfully traverse the rejection and request reconsideration.

As to a rejection under §102, "[a]nticipation is established only when a single prior art reference discloses expressly or under the principles of inherence, each and every element of the claimed invention." *RCA Corp. v. Applied Digital Data Systems, Inc.*, (1984, CAFC) 221 U.S.P.Q. 385. The standard for lack of novelty, that is for "anticipation," is one of strict identity. To anticipate a claim, a patent or a single prior art reference must contain all of the essential elements of the particular claims. *Schroeder v. Owens-Corning Fiberglass Corp.*, 514 F.2d 901, 185 U.S.P.Q. 723 (9th Cir. 1975); and *Cool-Fin Elecs. Corp. v. International Elec. Research Corp.*, 491 F.2d 660, 180 U.S.P.Q. 481 (9th Cir. 1974). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 868 F.2d

1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim. In re Bond, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

The rejection of independent claim 29, and its dependent claims 30-32 and 34-37, is respectfully traversed at least because the single cited reference does not disclose all of the essential elements of the claims arranged as required by the claims and in as complete detail as in the claims. In this regard, claim 29 recites:

“29. (Previously presented) A method for estimating consumables requirements for a print job, comprising:

providing printer parameters indicative of resources of a predetermined printer including an available amount of consumables;

originating the print job at a first computer at a first network node;

communicating the print job to a second computer at a second network node;

at the second computer, analyzing the print job to determine print job parameters that affect a required amount of the consumables;

based on the print job parameters, estimating at the second computer the required amount of the consumables required to print the print job;

based on the printer parameters and the required amount of the consumables, making a determination at the second computer whether sufficient consumables exist to print the print job;
and

communicating the determination from the second computer to the first computer.”
(emphasis added)

The Farrell ‘493 reference is directed to a “printing machine that records information about resources expended to carry out a printing request. ... Subsequently, before carrying out another printing request, the printing machine uses the recorded information to make a prediction or estimate of resources required to carry out the printing request” (Abstract). The Office states that the Farrell ‘493 reference discloses the limitation recited in claim 29 of making a determination at the second computer, based on the printer parameters and the required amount of the consumables, whether sufficient consumables exist to print the print job (Final Office Action, p.3). Applicants respectfully disagree.

In order to determine whether sufficient consumables exist to print the print job, two

different types of information are required. First, the consumable resources required (such as ink, toner, print media, etc.) to print the print job must be determined. Second, the amount of the consumable resources that are available to print the print job must be ascertained. Determining whether or not sufficient consumable resources exist to print the print job requires determining whether the available resources exceed the required resources.

While the Farrell '493 reference may disclose estimating the consumable resources required to print the print job, it does not disclose providing printer parameters indicative of resources including an available amount of consumables. With regard to the limitation of providing such printer parameters, the Office states that "database 24 includes records 50 that contain data useful to estimate consumables required, col. 4, lines 5-17" (Final Office Action, p.3; emphasis added). The Farrell '493 reference discloses that an "estimation process 9 ... uses a record, selected by database reader 8, to estimate, or predict, consumable resources required to print a future job" (col. 4, lines 10-13). However, the Farrell '493 reference is silent as to ascertaining the available amount of consumables (for example, at a particular printer or printing system). Because the estimation process 9 of estimator 10 of the Farrell '493 reference does not know the available amount of consumables, it cannot make a determination whether sufficient consumables exist to print the print job.

The novel features of the present invention are not anticipated by the Farrell '493 reference in that the above-discussed essential elements, arranged as required by the claims and recited in as complete detail as in the claim, are absent from the reference. Therefore, the rejection is improper at least for that reason and should be withdrawn.

Dependent claims 31-32 are further patentably distinguishable over the Farrell '493 reference because they emphasize printhead temperature. In this regard, claim 31 recites:

"31. (Previously presented) The method of claim 30, wherein the printer parameters are further indicative of a printhead temperature of the predetermined printer." (emphasis added)

With regard to printhead temperature, claim 32 recites:

“32. (Previously presented) The method of claim 31, wherein the printhead temperature affects ink usage, the estimating including adjusting the required amount of the consumables based on the printhead temperature.” (emphasis added)

The Office does not cite any portion of the reference in rejecting claim 31. In rejecting claim 32, the Office cites a portion of the reference that merely discloses

“Subsequently, to estimate consumables needed for another print request, estimator 10 receives a desired quantity of the next print request, and processes data in a selected structure 50 to estimate a quantity of one or more resources needed to produce the next print request.” (col. 6, lines 30-34).

There is no disclosure of a printhead temperature of a printer, and to its effects on ink usage or the estimation process, in the above-cited portion of the Farrell ‘493 reference, or anywhere else in the Farrell ‘493 reference, which is silent as to printhead temperature.

Dependent claims 36-37 are further patentably distinguishable over the Farrell ‘493 reference because they emphasize alternative printers. In this regard, claim 36 recites:

“36. (Previously presented) The method of claim 29, comprising:
identifying at the second computer at least one alternative printer having sufficient consumables to print the print job, and communicating the identity of the at least one alternative printer to the first computer.” (emphasis added)

With regard to alternative printers, claim 37 recites:

“37. (Previously presented) The method of claim 36, comprising:
at the first computer, selecting one of the alternative printers and sending the print job from the first computer to the alternative printer.” (emphasis added)

In rejecting claim 36, the Office states that “Examiner notes the printers 2 in the system 1 of Farrell et al send data to the Estimator 10. Farrell discloses that Estimator 10 may be located at printing systems 2 as well as user interface 12, col. 2, lines 37-39. All of these locations are different nodes. Thus, Estimator 10 can send data to an alternative node.” (Final Office Action, p.5). However, even assuming arguendo that this statement is correct, such operation fails to disclose all the limitations of claim 36. There is no disclosure in the Farrell ‘493 reference that the estimator 10, or any other element, identifies an alternative printer (different from the

predetermined printer) on which to print the print job. Further, and as discussed above with reference to claim 29, the reference does not disclose determining whether any printer has sufficient consumables to print the print job. It follows that, if no alternative printer is identified, no alternative printer can be selected or have a print job sent to it, as recited in claim 37.

Rejection Under 35USC §103

Claims 1, 2, 6-9, 21, 22, and 26 have been rejected under 35 USC §103(a), as being unpatentable over U.S. patent 5,383,129 to Farrell et al. ("Farrell '129") in view of U.S. patent 6,266,493 to Farrell et al. ("Farrell '493"). Applicants respectfully traverse the rejection and request reconsideration.

As to a rejection under §103(a), the U.S. Patent and Trademark Office ("USPTO") has the burden under §103 to establish a *prima facie* case of obviousness by showing some objective teaching in the prior art or generally available knowledge of one of ordinary skill in the art that would lead that individual to the claimed invention. See In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). The Manual of Patent Examining Procedure (MPEP) section 2143 discusses the requirements of a *prima facie* case for obviousness. That section provides as follows:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and reasonable expectation of success must be found in the prior art, and not based on applicant's disclosure.

The rejection of independent claim 1, and its dependent claims 2 and 6-9, is respectfully traversed for at least the following reasons. Claim 1 recites:

“1. (Previously presented) A method for estimating ink usage of a print job, comprising: connecting a computer peripheral device to a host computer having predefined information relating to the peripheral device; and offering pricing and estimation of ink and image consumables for completing the print job using a plurality of different printers including the computer peripheral device, before the print job is performed.” (emphasis added)

The Office has not established a *prima facie* case of obviousness at least because the applied references do not teach or suggest all of Applicant’s claim limitations.

The Office states that:

“Farrell et al (‘129) does not expressly disclose using a plurality of different printers including the computer peripheral device. Farrell et al (‘493) teach of the user of several (*four are shown in Fig. 2*) printing systems 2 (col. 2, line 40, and see Figs. 1 and 2) connected to a user terminal 12 and estimator 10 (computer peripheral device) for price and consumable estimation.” (Final Office Action, p.6; emphasis in original).

Applicants respectfully disagree that the Farrell ‘129 and Farrell ‘493 references, taken in combination, teach or suggest all the limitations of claim 1. While the Farrell ‘493 reference does disclose a plurality of printing systems 2 (e.g. in Fig. 2), it does not disclose that the estimator 10 offers pricing and estimation of consumables for completing the print job using a plurality of different printers including the computer peripheral device. Instead, the estimator 10 offers pricing and estimation of consumables for completing the print job using only a single one of the printing systems 2. As taught by the Farrell ‘493 reference,

“[d]atabase 24 includes multiple data structures 50 containing data about previous instances of print jobs. Estimator 10 ... constructs records 50 and writes records 50 into database 24, database reader 8 that reads records 50 and selects a record 50 according to criteria, and estimation process 9 that uses a record, selected by database reader 8, to estimate, or predict, consumable resources required to print a future job.” (col. 4, lines 5-13; emphasis added)

It is noted, therefore, that the Farrell ‘493 reference teaches that only a single record 50 is used to estimate the consumable resources required to print the future print job. This is further reinforced with reference to the flowcharts of Figs. 6A-C and Figs. 7A-C, in that

“[e]stimator 10 deselects all remaining structures except one having the most recent time stamp (step 50), and uses the remaining structure 50 to estimate the consumables for the next job (step 55).” (col. 5, lines 4-7; also lines 29-32; emphasis added)

The single selected record 50 is associated with a particular “model identifier of the printing system 2 used in” printing the prior print job, and a particular “model instance identifier of the printing system used in” printing the print job (col. 4, lines 35-40). For example, in the record 50 illustrated in Fig. 5, the model identifier indicates that an ACME printing system 2 was used to print the print job associated with record 50, and that the model instance identifier of the printing system 2 was printer ACME43. Accordingly, any estimate of consumables generated by estimator 10 is accurate only for a single printing system 2. For example, the estimate generated using record 50 as illustrated in Fig. 5 would be accurate only for the printing system 2 that corresponds to printer instance ACME43 of model ACME).

Furthermore, contrary to what is stated by the Office, it is not possible for estimator 10 to be the computer peripheral device. A complete construction of the limitation of claim 1 recites that the computer peripheral device is used for completing the print job (i.e. printing the print job). The estimator 10 of the Farrell ‘493 reference does not print the print job, and therefore cannot equate to the computer peripheral device of claim 1.

The features of the present invention are neither disclosed nor suggested by the Farrell ‘129 reference in combination with the Farrell ‘493 reference in that the combined references do not teach the limitation of offering pricing and estimation of ink and image consumables for completing the print job using a plurality of different printers including the computer peripheral device.

In addition, the Office has not established a *prima facie* case of obviousness at least because there is no suggestion or motivation to modify the reference or to combine reference teachings. The Office states that the motivation is “to improve the capability of estimation for networked machines” (Final Office Action, p.6). Applicants respectfully believe that the stated motivation is merely a conclusory statement of generalized advantages, and that this is too vague and not specific enough to ascertain a motivation in one or the other reference for combining them. In addition, the references teach away from such a combination.

Applicants respectfully traverse the Office’s assertion that it would have been obvious to

a person of ordinary skill in the art at the time the invention was made to include the claimed features of Applicants' invention. Such could be possible only in hindsight and in light of Applicants' teachings. Therefore, the rejection is improper at least for these reasons and should be withdrawn.

Independent claim 21 recites limitations similar to those of claim 1, discussed above. Therefore, for similar reasons as explained heretofore with regard to claim 21, the features of the present invention are not taught or suggested by the cited references and there is no suggestion or motivation to modify the reference or to combine reference teachings. Applicants respectfully traverse the Office's assertion that it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the claimed features of Applicants' invention. Such could be possible only in hindsight and in light of Applicants' teachings. Therefore, the rejection of independent claim 21, and its corresponding dependent claims 22 and 26, is improper at least for these reasons and should be withdrawn.

Claims 10-14 have been rejected under 35 USC §103(a), as being unpatentable over Hitachi Koki Imaging Solutions, Inc. (HiKIS) (Office World News; Oct. 2000; vol. 28., issue 10; pgs. 30-31) ("Hitachi") in view of U.S. patent 6,266,493 to Farrell et al. ("Farrell '493"). Applicants respectfully traverse the rejection and request reconsideration.

The rejection of independent claim 10, and its dependent claims 11-14, is respectfully traversed for at least the following reasons. Claim 10 recites:

"10. (Original) A method for analyzing ink usage for a printer, comprising:
communicating a type of ink cartridge and ink reservoir system to a host computer as part of a print job submission;
 estimating the ink to be used in a print job based on predefined printing requirements; and
 determining the number of print swaths and pages the ink cartridge can complete based on ink available in the ink reservoir system." (emphasis added)

The Office has not established a *prima facie* case of obviousness at least because the applied references do not teach or suggest all of Applicant's claim limitations.

Applicants respectfully disagree that the Hitachi and Farrell '493 references, taken in combination, teach or suggest all the limitations of claim 1. In particular, these references do not teach and suggest the limitation of "communicating a type of ink cartridge and ink reservoir system to a host computer as part of a print job submission".

With regard to this limitation, the Office states that "i-manage allows customers/users of a printing machine to check a printer's equipment including consumables such as an ink cartridge, para. 4" (Final Office Action, p.8). To whatever extent this may be true, however, such an equipment check is not performed as part of a print job submission. Rather, it is performed using an i-manage software module supplied by Hitachi, which a module which "provides comprehensive remote device management to allow dealers and customers to check a copier/printer's status, including ... extensive usage statistics including page counts by media size and consumable usage" (Hitachi, para. 4). Accordingly, to whatever extent the Hitachi reference teaches communicating a type of ink cartridge and ink reservoir system to a host computer, it does not teach that such communication is performed as part of a print job submission.

Also, for similar reasons as explained previously with reference to claim 29, the Farrell '493 reference does not disclose communicating a type of ink cartridge and ink reservoir system to a host computer at all, much less as part of a print job submission..

The features of the present invention are neither disclosed nor suggested by the Hitachi reference in combination with the Farrell '493 reference in that the combined references do not teach the limitation of communicating a type of ink cartridge and ink reservoir system to a host computer as part of a print job submission.

In addition, the Office has not established a *prima facie* case of obviousness at least because there is no suggestion or motivation to modify the reference or to combine reference teachings. The Office states that the motivation is "to estimate quantities prior to executing print jobs" (Final Office Action, p.9). Applicants respectfully believe that the stated motivation is merely a conclusory statement of generalized advantages, and that this is too vague and not

specific enough to ascertain a motivation in one or the other reference for combining them. Furthermore, the Hitachi reference is not directed to estimation of the consumables needed for a particular print job, or to print jobs at all; rather, the Hitachi reference is directed to remote device management of copiers or printers. So, the Farrell '493 reference does not aid in the objective of Hitachi. The references teach away from such a combination.

Applicants respectfully traverse the Office's assertion that it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the claimed features of Applicants' invention. Such could be possible only in hindsight and in light of Applicants' teachings. Therefore, the rejection is improper at least for these reasons and should be withdrawn.

Claims 3-5, 23-25, and 27-28 have been rejected under 35 USC §103(a), as being unpatentable over U.S. patent 5,383,129 to Farrell et al. ("Farrell '129") in view of U.S. patent 6,757,070 to Lin et al. ("Lin"). Applicants respectfully traverse the rejection and request reconsideration based on the dependence of these claims on either independent claim 1 or independent claim 21, whose reasons for allowability over the Farrell '129 reference have been discussed heretofore and against which the Lin reference has not been cited. In addition, the stated motivation to combine the Lin reference with the Farrell '129 reference is improper in that it is merely a conclusory statement of generalized advantages, and the references teach away from such a combination. Furthermore, the rejection of these dependent claims is improper on its face in that the base claims from which they depend have been rejected under U.S. patent 5,383,129 to Farrell et al. ("Farrell '129") in view of U.S. patent 6,266,493 to Farrell et al. ("Farrell '493").

Claims 33 and 38 have been rejected under 35 USC §103(a), as being unpatentable over U.S. patent 6,266,493 to Farrell et al. ("Farrell '493") in view of U.S. patent 5,383,129 to Farrell et al. ("Farrell '129"). Applicants respectfully traverse the rejection and request reconsideration

based on the dependence of these claims on independent claim 29, whose reasons for allowability over the Farrell '493 reference have been discussed heretofore and against which the Farrell '129 reference has not been cited. In addition, the stated motivation to combine the Farrell '129 reference with the Farrell '493 reference is improper in that it is merely a conclusory statement of generalized advantages, and the references teach away from such a combination.

Conclusion

Attorney for Applicant(s) has reviewed each one of the cited references made of record and not relied upon, and believes that the claims presently on file in the subject application patentably distinguish thereover, either taken alone or in combination with one another.

Therefore, all claims presently on file in the subject application are in condition for immediate allowance, and such action is respectfully requested. If it is felt for any reason that direct communication with Applicant's attorney would serve to advance prosecution of this case to finality, the Examiner is invited to call the undersigned Robert C. Sismilich, Esq. at the below-listed telephone number.

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Respectfully submitted,



Robert C. Sismilich

Reg. No. 41,314

Attorney for Applicant(s)

Telephone: (858) 547-9803

Date: 5/19/06

Hewlett-Packard Company
Intellectual Property Administration
P. O. Box 272400
Fort Collins, CO 80527-2400